# Elizabeth Waukau’s Water Wasting Unit

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| **Unit Author** | | | | |
| First and Last Name | | Elizabeth Waukau | | |
| School District | | Menominee Indian School District | | |
| School Name | | Keshena Primary School | | |
| School City, State | | Keshena, WI 54135 | | |
| **Unit Overview** | | | | |
| **Unit Title** | | | | |
| Water Wasting | | | | |
| **Unit Summary** | | | | |
| Examine the current wasting of water in our elementary school, i.e. bubblers, sinks, and toilets. View how schools around the world have limited access to fresh water and how valuable water is to their given area. | | | | |
| **Subject Area** | | | | |
| Social Studies, Science and Math | | | | |
| **Grade Level** | | | | |
| 1st Grade | | | | |
| **Approximate Time Needed** | | | | |
| 8-30 minute sessions over the course of 3 weeks | | | | |
| **Unit Foundation** | | | | |
| **Habits of Learning Taxonomy** | | | | |
| Costa and Kallick’s 16 Habits of Mind, #2, 3, 5, 12, 13, 14 & 16  Bloom’s Revised: Remembering, Analyzing & Creating  Marzano’s Dimensions of Learning: Focus on Dimension 2, guided in relating new knowledge to what they know. | | | | |
| **Targeted Content Standards and Benchmarks** | | | | |
| **Social Studies**  E.4.4 Describe the ways in which ethnic cultures influence the daily lives of people  E.4.10 Give examples and explain how the media may influence opinions, choices, and decisions.  E.4.13 Investigate and explain similarities and differences in ways that cultures meet human needs  E.4.15 Describe instances of cooperation and interdependence among individuals, groups, and nations, such as helping others in famines and disasters  C.4.6 Locate, organize, and use relevant information to understand an issue in the classroom or school, while taking into account the viewpoints and interests of different groups and individuals  B.4.8 Compare past and present technologies related to energy, transportation, and communications and describe the effects of technological change, either beneficial or harmful, on people and the environment  D.4.7 Describe how personal economic decisions, such as deciding what to buy, what to recycle, or how much to contribute to people in need, can affect the lives of people in Wisconsin, the United States, and the world  A.4.6 Identify and distinguish between predictable environmental changes, such as weather patterns and seasons, and unpredictable changes, such as floods and droughts, and describe the social and economiceffects of these changes  **Math** Represent and interpret data Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.  **Science**  A.4.5 When studying a science-related problem, decide what changes over time are occurring or have occurred  C.4.2 Use the science content being learned to ask questions, plan investigations, make observations, make predictions, and offer explanations  C.4.3 Select multiple sources of information to help answer questions selected for classroom investigations  C.4.4 Use simple science equipment safely and effectively, including rulers, balances, graduated cylinders, hand lenses, thermometers, and computers, to collect data relevant to questions and investigations  C.4.5 Use data they have collected to develop explanations and answer questions generated by investigations  C.4.6 Communicate the results of their investigations in ways their audiences will understand by using charts, graphs, drawings, written descriptions, and various other means, to display their answers  C.4.7 Support their conclusions with logical arguments  C.4.8 Ask additional questions that might help focus or further an investigation Writing/PresentationComprehension and Collaboration Participate in collaborative conversations with diverse partners about *grade 1 topics and texts* with peers and adults in small and larger groups.  Follow agreed-upon rules for discussions (e.g., listening to others with care, speaking one at a time about the topics and texts under discussion).  Build on others’ talk in conversations by responding to the comments of others through multiple exchanges.  Ask questions to clear up any confusion about the topics and texts under discussion.  Ask and answer questions about key details in a text read aloud or information presented orally or through other media.  Ask and answer questions about what a speaker says in order to gather additional information or clarify something that is not understood. Presentation of Knowledge and Ideas Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.  Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.  Produce complete sentences when appropriate to task and situation Production and Distribution of Writing With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.  With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. Research to Build and Present Knowledge Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions).  With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. | | | | |
| **Student Objectives/Learning Outcomes** | | | | |
| Discuss and formulate an opinion of water wasting in the world. | | | | |
| **Curriculum-Framing Questions** | | | | |
|  | **Essential Question** | | How valuable is water around the world? | |
|  | **Unit Questions** | | Do all the people around the world have the same drinking/daily use water source? | |
|  | **Content Questions** | | Where do people around the world get their drinking/daily use water?  Is water valued more in one part of the world vs. other parts of the world?  How is water wasted around the world?  How do we stop or cut down on water wasting? | |
| **Assessment Plan** | | | | |
| **Rubric** | | | | |
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| **Assessment Summary** | | | | |
| Students will be assessed using various tools, such as the rubric listed above, formal observations, data collection,  and group/individual responses to question prompt. As well as, computer generated questions/responses from  other students. | | | | |
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| **Visual Ranking Elements** (Complete this section if this tool will be used in the unit) | | | | |
| **Visual Ranking Project Name** | | | | |
| Water Wasting | | | | |
| **Project Description** | | | | |
| *Examine the current wasting of water in our elementary school, i.e. bubblers, sinks, and toilets. View how schools around the world have limited access to fresh water and how valuable water is to their given area.* | | | | |
| **Prompt** | | | | |
| Around the world, how easy is it to get drinking water? | | | | |
| **Sorting List** | | | | |
| Easy 0-50 feet  Somewhat Easy 51-100 feet  Hard 101-500 feet  Very Hard 501 or more feet | | | | |
| **Practice Ranking** | | | | Password: |
| Teacher ID: ewaukau | | | | Password: bubblers |
| Practice Team ID 1:bubblers | | | | Password: sinks |
| **Visual Ranking Elements** (Complete this section if this tool will be used in the unit) | | | | |
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| **Unit Details**  **Week 1-** Oral discussion observation to determine the student’s background knowledge  that there are other places/continents in the world. Move on to continent locations and  water sources around the continents. Discuss freshwater vs. salt water. Complete experiment  where students will taste drinking water w/ salt water.  **Week 2-** revisit the continent maps and use pencils to draw, lakes, rivers, streams, etc.  on the continents. Color these areas blue. Discuss how other people around the world  get drinking/daily use water. Match pictures on smart board of lake, river, stream, etc.  Complete experiment for water running for 1 minute, how much 8 oz cups can be filled  With the water from the bubbler and from the sink in the room/bathroom  Find out from the janitors how many gallons are the toilet tanks in the bathroom and how  Predict how many times it is flushed in a day. Develop a check list to be kept outside the  1sst grade bathroom doors for a check off list when someone uses the bathroom. Predict how  Many gallons are used in a week/month. Chart the findings in computer program for future  Presentation to the grade levels.  **Week 3-** discusses specific continents and how they differ from continent to continent.  View pods on how other students/children around the world have to deal with the water crisis and how  Hard/easy it is for them to access fresh drinking water/daily use water in their area. Chart the continents  And the distance students have to go to access their given water source. Develop a community plan on  Catching rain water, test the rain water for ph samples, good ph vs. bad ph. Have other grade levels help  Develop a pamphlet that KPS students can give to community members on rain barrels and their use.  KPS can lead the way in with rain barrels and janitors could use the water for mopping, cleaning, etc. | | | | |
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|  | **Resource Student** | | Longer time to complete any assignments, resource teacher assistance and teacher guided prompts. Hands on project groups will be utilized more as well. | |
|  | **Gifted Student** | | Although we do not have a Gifted Program, our team would have the advanced students work to develop the presentation that the 1st grade team would present to the other grade levels in the school. | |
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| **Practice Ranking** | | | | | Password: |
| Teacher ID: ewaukau | | | | | Password: bubblers |
| Practice Team ID 1:bubblers | | | | | Password: sinks |
| Practice Team ID 2:sinks | | | | |  |

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| **Printed Materials** | Water collection chart, rubric |
| **Supplies** | Plastic bins for water collection, 8 oz cup for measuring, timers, salt, water, cups, stir stix |
| **Technology -Hardware** | Computers, smart board, camera, printer |
| **Technology -Software** | Microsoft word, smart board, camera picture reader |
| **Internet Resources** | <http://current.com/shows/upstream/90271062_how-many-gallons-of-water-does-it-take-to-make.htm>  <http://current.com/news/90004292_life-cycle-assessments-measure-waters-impact-on-earths-ecosystems-for-the-first-time.htm>  [http://current.comhttp://current.com/news/91169934\_us-coal-plants-dump-thousands-of-gallons-of-waste-into-drinking-water-supplies-a-day.htm/green/90266988\_7-simple-unexpected-ways-to-save-water.htm](http://current.com/green/90266988_7-simple-unexpected-ways-to-save-water.htm) |
| **Other Resources** | Water experiment, measurement chart, timer chart, |

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